

Planning for an Uncertain Future (Scenarios)

Comments from the August 22nd Workshop

I Meeting Water Management Objectives

High Priority Resource Management Strategies

- Land use planning
- Agricultural land stewardship
- Ecosystem restoration
- New storage
- New conveyance
- Water transfers
- Conjunctive management

Other Considerations

- Include natural landscape
- Consider on farm water storage
- Consider thresholds for supply availability (over reliance on groundwater)

Possible Response Package Themes

- High efficiency
- Urban water use efficiency
- Improved operational efficiency
- Focus on meeting environmental needs
- Implementation time
- Alternative living conditions
- New storage as last alternative
- Consider MWD actions / Agency plans
- Consider “placed based” actions

Land Use Scenarios

- Need to be flexible to capture what is likely to happen in the future. Need a good spectrum of possible development scenarios.
- Need to look at agricultural and urban development scenarios independently. Look beyond urbanization of agricultural lands.
- Using density as a policy driver may be less relevant to Board of Supervisors. Look at General Plans

Environmental Water

- Look at other flow recommendations like the Mokelumne River and new SWRCB Delta Flow criteria
- Capture environmental impacts associated with groundwater overdraft

II. Evaluating Performance of Resource Management Strategies

- Include cost of not meeting demands
- Need to go beyond meeting/not meeting instream flow requirements
- Include supply reliability of local and imported supplies
- Include extreme events (extended drought)
- Consider seasonal/monthly scale of reliability
- Look at irrigation district scale impacts
- Use different tiers of reliability (80%, 90%, 95%)
- Evaluate performance across several years
- Consider implementation costs above and beyond cost per acre-foot (planning costs, EIR costs, operations and maintenance costs , etc)
- Use cost/benefit analysis when evaluating strategies

Time scale

- Use multiple planning horizons. 30 years for agriculture; longer for climate change.

Spatial Scale

- Consider how Planning Area boundaries overlay with regional water management groups.

III. How Future Uncertainties Affect Decisions

Population uncertainties

- Consider economic disparities.
- The number of scenarios used is less important than capturing threatening conditions
- Need to consider how responsive population might be to changes
- Future water demand should capture how much water is needed to reduce groundwater overdraft.
- Scenarios should consider uncertainty about new environmental requirements
- Should consider low cost strategies for low income areas
- Consider ability for areas to pay for strategies
- Consider catastrophic events

Climate change

- Capture range of potential climate change. May not need 12 scenarios.
- Capture regional differences associated with climate change
- Look at how climate change affects supply reliability
- Keep it simple. Use stock market analogy

IV. Glossary

- Add “Climate Change Scenario”

General questions

1. How is the State Water Project and Central Valley Project represented in the analysis with WEAP

Answer: The SWP and CVP reservoirs and exports are represented. The WEAP model developed to support the Water Plan is designed to represent the water management system at sufficient detail to reflect important planning conditions, but not for detailed operations. As a result, many system features, such as SWP and CVP operations, are simplified to capture the broad regional behavior.